

West Nile Virus

Frequently Asked Questions

What is West Nile virus?

West Nile virus is a mosquito-borne disease that can cause encephalitis, a brain inflammation. WNV is closely related to St. Louis encephalitis virus (SLEV) which is found in the United States and to Kunjin virus (KV) which is found in Australia, some Western Pacific islands and parts of South East Asia. West Nile virus was first detected in North America in 1999 in New York, and in Pennsylvania in 2000. Prior to that it had only been found in Africa, Eastern Europe, and West Asia.

Infected mosquitoes pass the virus onto birds, animals and people. West Nile virus cases in Pennsylvania occur primarily in the mid summer or early fall, although mosquito season is usually April-October.

What is West Nile encephalitis?

West Nile fever is a case of mild disease in people, characterized by flu-like symptoms. West Nile fever typically lasts only a few days and does not appear to cause any long-term health effects.

More severe disease due to a person being infected with this virus can be “West Nile encephalitis,” West Nile meningitis or West Nile meningoencephalitis. Encephalitis refers to an inflammation of the brain, meningitis is an inflammation of the membrane around the brain and the spinal cord, and meningoencephalitis refers to inflammation of the brain and the membrane surrounding it.

How can I get it?

The principle route of human infection with West Nile virus is through the bite of an infected mosquito. Additional routes of infection have become apparent during the 2002 West Nile epidemic. It is important to note that these other methods of transmission represent a very small proportion of cases. Other methods of transmission include blood transfusion, organ transplantation, mother-to-child (ingestion of breast milk and transplacental) and occupational.

Who is most at risk?

All residents of areas where virus activity has been identified are at risk of getting West Nile encephalitis; persons over 50 years of age have the highest risk of severe disease. It is unknown if immunocompromised persons are at increased risk for WNV disease.

What are the symptoms?

People with mild infections may experience fever, headache, body aches, skin rash and swollen lymph glands. Most people who are infected with the West Nile virus will not have any type of illness. It is estimated that 20% of the people who become infected will develop West Nile fever: mild symptoms, including fever, headache, and body aches, occasionally with a skin rash on the trunk of the body and swollen lymph glands.

The symptoms of severe infection (West Nile encephalitis or meningitis) include headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, and paralysis. It is estimated that 1 in 150 persons infected with the West Nile virus will develop a more severe form of disease.

Symptoms of mild disease will generally last a few days. Symptoms of severe disease may last several weeks, although neurological effects may be permanent.

Is there treatment or a vaccine?

There is no specific treatment or vaccine for West Nile virus infection. Most people fully recover from the virus. In more severe cases, intensive supportive therapy is indicated, often involving hospitalization, intravenous fluids, airway management, respiratory support (ventilator), prevention of secondary infections (pneumonia, urinary tract, etc.), and good nursing care.

Where do mosquitoes breed?

There are about 60 different species of mosquitoes in Pennsylvania. While most do not transmit West Nile virus, several mosquito species have been found to transmit the virus.

Mosquitoes lay their eggs in stagnant water around the home. Weeds, tall grass, shrubbery and discarded tires also provide an outdoor home for adult mosquitoes. By eliminating places for mosquitoes to breed, we can go a long way to prevent West Nile virus.

How can you reduce the number of mosquitoes around your home and neighborhood?

Mosquitoes breed in standing water. Even a small bucket that has stagnant water in it for seven days can become home to up to 1,000 mosquitoes. Here are some easy tips to eliminate standing water:

- a. Dispose of tin cans, plastic containers, ceramic pots or similar water holding containers that have accumulated on your property. Do not overlook containers that have become overgrown by aquatic vegetation.

- b. Pay special attention to discarded tires that may have accumulated on your property.
- c. Drill holes in the bottom of recycling containers that are left out of doors. Drainage holes that are located on the container sides collect enough water for mosquitoes to breed in.
- d. Clean clogged roof gutters on an annual basis, particularly if the leaves from surrounding trees have a tendency to plug up the drains. Roof gutters are easily overlooked but can produce millions of mosquitoes each season.
- e. Turn over plastic wading pools when not in use. A wading pool becomes a mosquito producer if it is not used on a regular basis.
- f. Turn over wheelbarrows and do not allow water to stagnate in birdbaths. Both provide breeding habitat for domestic mosquitoes.
- g. Aerate ornamental pools or stock them with fish. Water gardens are fashionable but become major mosquito producers if they are allowed to stagnate. Clean and chlorinate swimming pools that are not being used. A swimming pool that is left untended by a family that goes on vacation for a month can produce enough mosquitoes to result in neighborhood-wide complaints. Be aware that mosquitoes may even breed in the water that collects on swimming pool covers.

How can I protect myself?

It is not necessary to limit any outdoor activities, unless local officials advise you otherwise.

However, you can and should try to reduce your risk of being bitten by mosquitoes. In addition to reducing stagnant water in your yard, make sure all windows and doors have screens, and that all screens are in good repair.

If West Nile virus is found in your area:

- Take normal steps to prevent insect bites.
- Wear shoes, socks, long pants and a long-sleeved shirt when outdoors for long periods of time, or when mosquitoes are most active.
- Consider the use of mosquito repellent, according to directions, when it is necessary to be outdoors. Wash all treated skin and clothing when returning indoors.

Remember, electromagnetic and ultrasound devices and Vitamin B are not effective in preventing mosquito bites.

Where else has West Nile virus been found?

Prior to 1999, no West Nile virus cases had been reported in the United States. During the 1999 encephalitis outbreak, there were 62 diagnosed human cases and

seven deaths. In 2000, there were 21 diagnosed human cases and two deaths. However many infected people showed mild flu-like symptoms or no symptoms at all. In 2001, there were 66 diagnosed cases and nine deaths. In 2002, there were 4161 diagnosed cases and 277 deaths across the United States (62 diagnosed cases and nine deaths in PA). In 2003, there were 9175 human cases reported to CDC with 230 deaths and in PA there were 247 human cases and 8 deaths.

In 2000, West Nile virus had been found in New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, Virginia, Maryland, Pennsylvania, North Carolina, and New Hampshire. By 2001, the virus was identified in 27 states (AL, AR, CT, DE, FL, GA, IA, IL, IN, KY, LA, MA, MD, ME, MI, MO, MS, NC, NH, NJ, NY, OH, PA, RI, TN, VA, WI) and the District of Columbia. In 2002, all states in the continental US except for Arizona, Nevada, Oregon and Utah had positive cases of WNV. In 2003, human cases have been reported in all states in the continental US except for Maine, Oregon and Washington.

Where do I call/go if I need more information about West Nile Virus?

Visit other parts of this website, or call 1-877-PA-HEALTH toll-free for health-related questions.

How You Can Help with Dead Bird Reporting.

The West Nile virus infects certain wild birds. The infected birds, especially crows, are known to get sick and die from the infection. Reporting of dead birds is a good way to check for West Nile virus activity in the environment and allow implementation of prevention and control measures to minimize the spread of the virus. The Pennsylvania Dead Bird Surveillance program for West Nile virus relies on Commonwealth citizens to report and submit dead birds seen around their property or elsewhere to their West Nile County Coordinators. Since the virus was detected in New York City in 1999, thousands of dead birds have been submitted for testing by citizens in the northeastern US. **Pennsylvania residents are strongly encouraged to report and submit dead birds.** Residents should take the following steps when they see a dead bird:

1. The West Nile Control Coordinators are collecting 5 birds per week from each county for testing for West Nile Virus, from May 1 through October 31. The program is only testing corvids, raptors, and jays for testing at the present time. If you are interested in submitting your dead bird for testing and your bird is a corvid, raptor, or jay, call your West Nile County Coordinator at 389-9146 to see if your county is still accepting submissions, and for instructions.
2. Avoid bare-hand contact when handling dead birds. Use rubber gloves when handling a dead bird. If you do not have gloves, insert your hand into a plastic bag, grasp the bird carefully and invert the bag over the bird. Each bird should be placed in tied plastic bag, and